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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,999	08/26/2003	Jheroen P. Dorenbosch	CE10990J1121	6041
24273	7590	08/25/2006	EXAMINER	
MOTOROLA, INC INTELLECTUAL PROPERTY SECTION LAW DEPT 8000 WEST SUNRISE BLVD FT LAUDERDAL, FL 33322			FOX, BRYAN J	
			ART UNIT	PAPER NUMBER
			2617	

DATE MAILED: 08/25/2006

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**Technology Center 2600**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/649,999  
Filing Date: August 26, 2003  
Appellant(s): DORENBOSCH ET AL.

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Larry G. Brown  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed May 25, 2006 appealing from the Office action mailed February 9, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1, 2, 9-17, 22, 23, 25-30.

Claims 18-21 are allowed.

Claims 3-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 24 has been canceled.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

## **WITHDRAWN REJECTIONS**

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. Claims 3-8 are objected to and claims 18-21 are allowed.

### **(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

### **(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 9-11, 14, 16, 17, 22 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Han (US006714785B1).

Regarding **claim 1**, Han discloses that a mobile continuously measures pilot signal power from the adjacent base station and sends a handoff request to the service

base station when the measured value is higher than a threshold (see column 8, lines 25-39), which reads on the claimed, "determining that a wireless device operating in a first wireless communication system is detecting a triggering event." Upon detection of the handoff request, the service base station examines traffic resources of the adjacent base station through a base station controller to determine whether there are sufficient spare channels and proceeds to perform a handoff if there are spare channels (see column 8, line 66 – column 9, line 7), which reads on the claimed, "initiating a registration sequence with a second wireless communication system in response to determining that the wireless device is detecting the triggering event." The mobile station reports the location flag, direction flag and displacement to the base station so as to perform a handoff taking into consideration the traveling direction of the mobile station. When it is determined that the base station is not moving towards the adjacent base station, the handoff is cancelled (see column 8, line 25 – column 9, line 34), which reads on the claimed, "conducting a current call or a subsequent call via the second wireless communication system in response to determining that a speed or displacement of the wireless device exceeds a first predetermined threshold; and aborting the registration sequence in response to determining that a speed or displacement of the wireless device does not exceed a second predetermined threshold," wherein the direction of motion reads on the thresholds.

Regarding **claim 9**, Han discloses that the mobile station determines the direction flag and displacement (see column 4, lines 18-39), sends a handoff request to a base station (see column 8, lines 43-57) and sends a handoff cancel message to the

base station (see column 10, lines 8-31), which reads on the claimed, "the determining, initiating, conducting and aborting steps are performed in the wireless device, wherein the wireless device is a mobile subscriber unit."

Regarding **claim 10**, Han discloses that when it is determined that the base station is not moving towards the adjacent base station, the handoff is cancelled (see column 8, line 25 – column 9, line 34 and figure 8), which reads on the claimed, "aborting the registration sequence comprises, if the registration is complete, deregistering from the second wireless communication system in response to determining that a speed or displacement of the wireless device does not exceed the second predetermined threshold."

Regarding **claim 11**, Han discloses that the mobile station reports the location flag, direction flag and displacement (see column 8, lines 25-39), which reads on the claimed, "the speed or displacement of the wireless device step is determined by movement detecting means of the wireless device."

Regarding **claim 14**, Han discloses that a mobile continuously measures pilot signal power from the adjacent base station and sends a handoff request to the service base station when the measured value is higher than a threshold (see column 8, lines 25-39), which reads on the claimed, "determining that a wireless device operating in a first wireless communication system is detecting a triggering event." The mobile station reports the location flag, direction flag and displacement to the base station so as to perform a handoff taking into consideration the traveling direction of the mobile station (see column 8, line 25 – column 9, line 34). Upon detection of the handoff request, the

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service base station examines traffic resources of the adjacent base station through a base station controller to determine whether there are sufficient spare channels and proceeds to perform a handoff if there are spare channels and when it is determined that the base station is not moving towards the adjacent base station, the handoff is cancelled (see column 8, line 25 – column 9, line 34), which reads on the claimed, “initiating a registration sequence with a second wireless communication system in response to determining that the wireless device is detecting a triggering event and measuring a speed or displacement to the wireless device exceeding a first predetermined threshold.” When there exists an available channel, handover is performed (see column 8, line 25 – column 9, line 34), which reads on the claimed, “conducting current and subsequent calls via the second wireless communication system.”

Regarding **claim 16**, Han discloses that when it is determined that the base station is not moving towards the adjacent base station, the handoff is cancelled (see column 8, line 25 – column 9, line 34), which reads on the claimed, “aborting the registration sequence in response to determining that a speed or displacement of the wireless device does not exceed a second predetermined threshold.” The mobile station determines the direction flag and displacement (see column 4, lines 18-39), sends a handoff request to a base station (see column 8, lines 43-57) and sends a handoff cancel message to the base station (see column 10, lines 8-31), which reads on the claimed, “the determining, initiating, conducting and aborting steps are performed in the wireless device, wherein the wireless device is a mobile subscriber unit.”

Regarding **claim 17**, Han discloses that when it is determined that the base station is not moving towards the adjacent base station, the handoff is cancelled (see column 8, line 25 – column 9, line 34 and figure 8), which reads on the claimed, “if the registration sequence is completed, deregistering from the second wireless communication system in response to determining that a speed or displacement of the wireless device does not exceed a second predetermined threshold.”

Regarding **claim 22**, Han discloses that a mobile continuously measures pilot signal power from the adjacent base station and sends a handoff request to the service base station when the measured value is higher than a threshold (see column 8, lines 25-39), which reads on the claimed, “determining that a wireless device operating in a first wireless communication system is detecting a triggering event.” Upon detection of the handoff request, the service base station examines traffic resources of the adjacent base station through a base station controller to determine whether there are sufficient spare channels and proceeds to perform a handoff if there are spare channels (see column 8, line 66 – column 9, line 7), which reads on the claimed, “initiating a registration sequence with a second wireless communication system in response to determining that the wireless device is detecting the triggering event.” The mobile station reports the location flag, direction flag and displacement to the base station so as to perform a handoff taking into consideration the traveling direction of the mobile station. When it is determined that the base station is not moving towards the adjacent base station, the handoff is cancelled (see column 8, line 25 – column 9, line 34), which reads on the claimed, “determining at least one of a speed and a displacement of the



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wireless device; and conducting at least one of a current call and a subsequent call via the second wireless communication system in response to determining that at least one of the speed and displacement of the wireless device exceeds a first predetermined threshold; and aborting the registration sequence in response to determining that a speed or displacement of the wireless device does not exceed a second predetermined threshold.”

Regarding **claim 28**, Han discloses that a mobile continuously measures pilot signal power from the adjacent base station and sends a handoff request to the service base station when the measured value is higher than a threshold (see column 8, lines 25-39), which reads on the claimed, “detecting a triggering event at the wireless device.” The mobile station reports the location flag, direction flag and displacement to the base station so as to perform a handoff taking into consideration the traveling direction of the mobile station (see column 8, line 25 – column 9, line 34), which reads on the claimed, “measuring a speed or a displacement of the wireless device.” Upon detection of the handoff request, the service base station examines traffic resources of the adjacent base station through a base station controller to determine whether there are sufficient spare channels and proceeds to perform a handoff if there are spare channels and when it is determined that the base station is not moving towards the adjacent base station, the handoff is cancelled (see column 8, line 25 – column 9, line 34), which reads on the claimed, “initiating... a registration sequence with a second wireless communication system in response to detecting a triggering event at the wireless device.” When there exists an available channel, handover is performed (see column 8,

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line 25 – column 9, line 34), which reads on the claimed, “conducting the current or a subsequent call via the second wireless communication system in response to determining that the speed or the displacement of the wireless device exceeds a first predetermined threshold; and conducting the current call or a subsequent call via the first wireless communication system in response to determining that the speed or the displacement of the wireless device does not exceed the first predetermined threshold.” Han discloses that the mobile continuously measures pilot signal power from the adjacent base station and sends a handoff request to the service base station when the measured value is higher than a threshold (see column 8, lines 25-39), which reads on the claimed, “conducting a current call via a first wireless communication system,” and the initiation while conduction the current call via the first wireless communication system.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2, 12, 15, 21, 23, 25-27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han in view of Hammond et al (US 20040203789A1).

Regarding **claim 2**, Han fails to expressly disclose the triggering event is at least one of a detection of a wireless local area network border cell and a detection of a degradation of signal quality.

In a similar field of endeavor, Hammond et al disclose a mobile client moves from a data connection to a WLAN and the WLAN signal is lost due to range, so the mobile client makes an attachment to the more costly GPRS system (see paragraph 47), which reads on the claimed, "the triggering event is a detection of a wireless local area network border cell or a detection of a degradation of signal quality."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Han with Hammond et al to include the above handover when the a first system is out of range in order to eliminate the need for a user to manually change systems and provide a better method and system allowing use of a device in both networks (see paragraphs 13-14).

Regarding **claim 12**, Han fails to expressly disclose the use of an accelerometer detecting means or a global positioning system means.

In a similar field of endeavor, Hammond et al disclose the use of GPS (see paragraph 25).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Han with Hammond et al to include the above use of GPS in

order to take advantage of the free use of the system as suggested by Hammond et al (see paragraph 28).

Regarding **claim 15**, Han fails to expressly disclose the triggering event is at least one of a detection of a wireless local area network border cell and a detection of a degradation of signal quality.

In a similar field of endeavor, Hammond et al disclose a mobile client moves from a data connection to a WLAN and the WLAN signal is lost due to range, so the mobile client makes an attachment to the more costly GPRS system (see paragraph 47), which reads on the claimed, "the triggering event is a detection of a wireless local area network border cell or a detection of a degradation of signal quality."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Han with Hammond et al to include the above handover when the a first system is out of range in order to eliminate the need for a user to manually change systems and provide a better method and system allowing use of a device in both networks (see paragraphs 13-14).

Regarding **claim 23**, Han fails to expressly disclose the triggering event is at least one of a detection of a wireless local area network border cell and a detection of a degradation of signal quality.

In a similar field of endeavor, Hammond et al disclose a mobile client moves from a data connection to a WLAN and the WLAN signal is lost due to range, so the mobile client makes an attachment to the more costly GPRS system (see paragraph 47), which

reads on the claimed, "the triggering event is a detection of a wireless local area network border cell or a detection of a degradation of signal quality."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Han with Hammond et al to include the above handover when the a first system is out of range in order to eliminate the need for a user to manually change systems and provide a better method and system allowing use of a device in both networks (see paragraphs 13-14).

Regarding **claim 25**, the combination of Han and Hammond et al discloses that when it is determined that the base station is not moving towards the adjacent base station, the handoff is cancelled (see Han column 8, line 25 – column 9, line 34 and figure 8), which reads on the claimed, "aborting the registration sequence comprises, if the registration sequence is complete, deregistering from the second wireless communication system in response to determining that a speed or displacement of the wireless device does not exceed the second predetermined threshold."

Regarding **claim 26**, the combination of Han and Hammond et al discloses that the mobile station reports the location flag, direction flag and displacement (see column 8, lines 25-39), which reads on the claimed, "the speed or displacement of the wireless device is determined by movement detecting means of the wireless device."

Regarding **claim 27**, Han fails to expressly disclose the use of an accelerometer detecting means or a global positioning system means.

In a similar field of endeavor, Hammond et al disclose the use of GPS (see paragraph 25).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Han with Hammond et al to include the above use of GPS in order to take advantage of the free use of the system as suggested by Hammond et al (see paragraph 28).

Regarding **claim 29**, the combination of Han and Hammond et al discloses when it is determined that the base station is not moving towards the adjacent base station, the handoff is cancelled (see Han column 8, line 25 – column 9, line 34), which reads on the claimed, “determining again a speed or a displacement of the wireless device; and deregistering from the second wireless communication system in response to determining that the again determined speed or displacement of the wireless device does not exceed a second predetermined threshold.”

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Han in view of Hammond et al as applied to claims 12 and 19 above, and further in view of Mantyjarvi et al (US 20030109258A1).

Regarding **claim 13**, the combination of Han and Hammond et al fails to disclose the use of an accelerometer detecting means comprising at least three independent axes.

In a similar field of endeavor, Mantyjarvi et al disclose a terminal with an accelerometer block that comprises one or more accelerometers measuring acceleration in at least three orthogonal directions (see paragraph 37), which reads on

the claimed, "accelerometer detecting means comprising at least three independent axes."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Han and Hammond et al with Mantyjarvi et al to include the above use of an accelerometer in order to determine movement of the device as suggested by Montyjarvi et al (see paragraph 6) without the need for GPS equipment and signals.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Han in view of Cheng et al (US006771963B1) and further in view of Hammond.

Regarding **claim 30**, Han fails to disclose the triggering even is a detection of a wireless local area network border cell, the border cell providing information to the wireless device that identifies the cell as a border cell.

In a similar field of endeavor, Cheng discloses a base station that can operate as part of a CDMA system with a first allocation of frequency channels, and can handdown from a CDMA system to an AMPS system, or to a different CDMA system and the system may partly overlap another system (see column 4, lines 38-56). Base station 10 is equipped to handdown to the other system such that the mobile station continues to be served by base station 10, but according to the protocols of the second communication system (see column 5, lines 14-35), which reads on the claimed triggering event that is detection of a border cell, the border cell providing information to the wireless device that identifies the cell as a border cell.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Han with Cheng et al to include the above border cell handover function in order to allow a handover between systems operating with different protocols and thereby extending the operating range of the mobile device. The combination of Han and Cheng et al fails to disclose the use of wireless local area network.

In a similar field of endeavor, Hammond et al disclose the use of WLAN (see paragraph 47).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Han and Cheng et al with Hammond to include the above use of WLAN in order to take advantage of the benefits of WLAN such as portable network access.

#### **(10) Response to Argument**

The Appellant argues that it is well known that a handoff from one cell of a system to another cell of the same system is done without initiating a registration sequence with that system, therefore Han fails to disclose initiating a registration sequence with a second wireless system or aborting the registration with the second wireless system, particularly based on speed or displacement measurements of the wireless device. The Examiner respectfully disagrees. The Examiner reads a "registration process" to encompass any process included in registration. As the Appellant points out, registration may be explained as a 'process by which the mobile station notifies the base station of its location, status, identification, slot cycle and other characteristics.' Handover includes at least a location update and therefore would



encompass the term registration process. While registration and handoff may be different, the claim language calls only for a “registration process.”

The Appellant argues that “initiating a registration sequence with a second wireless communication system” is a process where a mobile unit first communicates with a second communication system that is different from the one with which it is currently communicating to begin operation in the second communication system. The claim language does not expressly call for a *different* second communication system except in the dependent claims 3 and 6. The Examiner concludes the independent claims were intentionally meant to read broader and do not necessarily require a second communication system different than the first communication system. Further the Examiner reads the different base stations disclosed by Han as encompassing the broadest reasonable interpretation in light of the specification of first and second communication systems, as each base station operates independently of the other and requires a handoff or registration process.

The Appellant argues that the phrase “aborting the registration sequence” is a process of terminating the attempt to establish operations via the different network. The claim language does not require a different network, only a different system, and, in light of the above discussion, the canceling of a handover encompasses the aborting the registration sequence.

The Appellant argues Han is directed to only a single CDMA system and fails to disclose different communication networks. The Examiner does not rely on Han to

disclose different communication networks or the different transceivers for different networks.

In response to Appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Hammond provides the motivation of eliminating the need for a user to manually change systems and provide a better method and system allowing use of a device in both networks (see paragraphs 13-14).

The Appellant argues Cheng fails to disclose detection of a wireless local area network border cell, and the border cell provides information to the wireless device that identifies the cell as a border cell. The Examiner respectfully disagrees. The cell disclosed by Cheng on the border of two systems reads on the broadest reasonable interpretation in light of the specification of a border cell. Further, the functionality disclosed by Cheng of base station 10 is equipped to handdown to the other system such that the mobile station continues to be served by base station 10, but according to the protocols of the second communication system (see column 5, lines 14-35) fulfills the limitation of providing information to the wireless device that identifies the cell as a

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border cell, wherein with the handdown process the wireless device would know it is a border cell.

***Allowable Subject Matter***

Claims 18-21 are allowed.

The following is an examiner's statement of reasons for allowance: the closest prior art applied, Han in view of Hammond et al and further in view of the applicants' admission of prior art discloses a mobile continuously measures pilot signal power from the adjacent base station and sends a handoff request to the service base station when the measured value is higher than a threshold (see Han column 8, lines 25-39). The mobile station reports the location flag, direction flag and displacement to the base station so as to perform a handoff taking into consideration the traveling direction of the mobile station (see Han column 8, line 25 – column 9, line 34). When it is determined that the base station is not moving towards the adjacent base station, the handoff is cancelled (see Han column 8, line 25 – column 9, line 34). Hammond et al disclose a mobile client with both a GPRS transceiver and a WLAN transceiver (see paragraph 39 and figure 8). The applicant admits as prior art the use of wireless system stacks (see page 3, lines 1-15).

The prior art applied fails to teach, disclose or suggest a handover manager, communicatively coupled to the controller, the first wireless communications system stack, the second wireless communications system stack, and the means for measuring speed or displacement of the wireless device, the handover manager for determining when to handover from the first wireless communication system to the second wireless

communication system in response to determining that a speed or displacement of the device exceeds a first predetermined threshold, wherein the handover manager aborts a registration sequence with the second wireless communication system in response to determining that a speed or displacement of the wireless device does not exceed a second predetermined threshold.

Claims 3-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 3, the closest prior art applied, Han in view of Hammond, fails to disclose the first communication system is a wireless local area network and the second wireless communication system is a wide area network, in conjunction with determining that a wireless device operating in a first wireless communication system is detecting a triggering event; initiating a registration sequence with a second wireless communication system in response to determining that the wireless device is detecting the triggering event; conducting a current call or a subsequent call via the second wireless communication system in response to determining that a speed or displacement of the wireless device exceeds a first predetermined threshold; and aborting the registration sequence in response to determining that a speed or displacement of the wireless device does not exceed a second predetermined threshold.

Regarding claim 6, the closest prior art applied, Han in view of Hammond, fails to disclose the first communication system is a wide area network and the second wireless communication system is a wireless local area network, in conjunction with determining that a wireless device operating in a first wireless communication system is detecting a triggering event; initiating a registration sequence with a second wireless communication system in response to determining that the wireless device is detecting the triggering event; conducting a current call or a subsequent call via the second wireless communication system in response to determining that a speed or displacement of the wireless device exceeds a first predetermined threshold; and aborting the registration sequence in response to determining that a speed or displacement of the wireless device does not exceed a second predetermined threshold.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

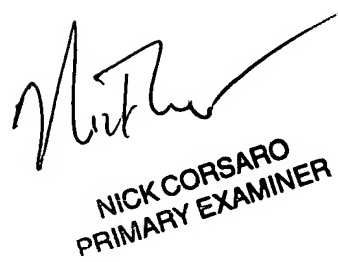
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